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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,995	05/31/2001	Ik-Soo Eo	300055.498	4687
500	7590	10/18/2004	EXAMINER	
SEED INTELLECTUAL PROPERTY LAW GROUP PLLC			NGUYEN, DUNG X	
701 FIFTH AVE			ART UNIT	
SUITE 6300			PAPER NUMBER	
SEATTLE, WA 98104-7092			2631	

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

K.D.

Office Action Summary

Application No.

09/871,995

Applicant(s)

EO ET AL.

Examiner

Dung X Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 - 1 and 20 is/are allowed.
- 6) ☒ Claim(s) 1 - 3, 6 - 8, 11 - 13, 18, and 19 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 9, 10, and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☒ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/871,995.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Specification

1. The certified copy of the translation of the certified copy of the priority document has not received.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 recites the limitation "the block" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1 – 3, 6 - 8, 11 – 13, 18, and 19 are rejected** under 35 U.S.C. 102(e) as being anticipated by Honda (US patent # 6,498,789 B1).

Regarding claim 1, Honda discloses (figure 4):

- CDMA mobile communication device comprising only one FTFO (23) corresponding to an only-one FIFO register that accumulates a previously stored values by using adding parts (9g, 9h, 9i); and then stores the accumulated value in the FIFO buffer when storing a finger-demodulated symbol in the FIFO buffer (column 3, lines 21 – 40).

Regarding claim 2, as followed by the limitations analyzed in claim 1, Honda further discloses (figure 4) that the control signal (24) corresponding to a control logic part, which determines a block position of the FIFO register (23) where the transmitted symbol demodulated in each finger is to be stored (column 11, lines 28 – 39), and outputs a combined symbol data (10) after receiving an output signal from information on timing of each path.

Regarding claim 3, as followed by the limitations analyzed in claim 2, Honda further discloses that wherein the control section (24) includes a part which sequentially selects a symbol data of each finger to be combined, by using a writing signal and a symbol duration that are received from each finger (column 3, lines 45 – 54, column 6, lines 52 – 63, and column 10, lines 25 – 39).

Regarding claim 6, as followed by the limitations analyzed in claim 1, Honda further discloses that a combiner for combining a symbol data demodulated in each finger with an output of FIFO register (column 11, lines 35 – 40).

Regarding claim 7, Honda discloses (figure 4) the step of accumulating a previously stored values by using an adding part; and then stores the accumulated value in the FIFO buffer when storing a finger-demodulated symbol in the FIFO buffer (column 3, lines 21 – 44).

Regarding claim 8, the limitations are analyzed in the same manner set forth as claim 3.

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Regarding claim 11, the limitations are analyzed in the same manner set forth as claim 6.

Regarding claim 12, Honda discloses (column 3, lines 34 – 54):

- When storing data in the FIFO register after finishing a processing of the symbol data in an i^{th} finger, selecting a symbol data and a PN phase of the i^{th} finger;
- Calculating a writing position of indicating a block of the register where the symbol data is stored, by using the selected PN code phase; and
- Reading the data of the block located at the calculated writing position, combining the read block data with the symbol data to be stored, and storing a resultant value into the block located at the calculated writing position.

Regarding claim 13, as followed by the limitations analyzed in claim 12, Honda further discloses that if at least two fingers ask a storage action at the same time, firstly processing a finger of a low number prior to a finger of a high number, and then processing the finger of a high number (column 4, lines 11 – 32 and column 8, lines 22 – 41).

Regarding claim 18, the limitations are analyzed in the same manner set forth as claim 7.

Regarding claim 19, the limitations are analyzed in the same manner set forth as claim 12.

6. **Claims 7 and 18 are also rejected** under 35 U.S.C. 102(a) as being anticipated by figure 1 admitted as a conventional system by applicant.

Regarding claim 7, figure 1 admitted as a conventional system by applicant show the step of accumulating a plurality of previously-stored FIFO register values by using adding part and then stores the accumulated in the FIFO register, when storing a finger-demodulated symbol in the FIFO register (each finger have to previously store in its own FIFO register in order to adjust a timing synchronization of the demodulated symbols, page 1, line 10 to page 2, line 11 of the specification).

Regarding claim 18, the limitations are analyzed in the same manner set forth as claim 7.

Allowable Subject Matter

7. **Claims 4, 5, 9, 10, and 14 are objected to** as being dependent upon a rejected base claim, and/or 35 U.S.C. 112, 2nd paragraph, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

8. **Claims 15 – 17 and 20 are allowed.** The following is a statement of reasons for the indication of allowable subject matter:

Regarding to the claimed invention, the prior art of record fails to show or render obvious of a symbol combining method and its corresponding apparatus for driving a Rake receiver that includes only one FIFO register, and accumulates a plurality of previously-stored FIFO register values by using adding part, and then stores the accumulated value in the FIFO register when storing a finger demodulated symbol in the FIFO register, substantial comprising:

(a) when storing data in the FIFO register after finishing a processing of the symbol data in an i^{th} finger, selecting a symbol data and a PN phase of the i^{th} finger;

(b) calculating a writing position of indicating a block of the register where the symbol data is stored, by using the selected PN code phase; and

(c) reading the data of the block located at the calculated writing position, combining the read block data with the symbol data to be stored, and storing a resultant value into the block located at the calculated writing position.

(d) repeating the steps (a), (b), and (c);

(e) upon generation of a reading signal, calculating a block position of FIFO register to be read; and

(f) selecting a data located at the calculated block position of the FIFO register in the step(e), transmitting the data to a combiner, and then initializing the register.

Contact Information

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung X. Nguyen whose telephone number is (571) 272-3010. The examiner can normally be reached on Monday through Friday from 8:00 AM to 17:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Ghayour Mohammad H. can be reached on (571) 272-3021. The fax phone numbers for this group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800.

DXN

September 07, 2004


MOHAMMED GHAYOUR
SUPERVISORY PATENT EXAMINER